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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,480

09/29/2006

Martin Dietmar Klaus Schneiderheinze

AP118-06

9592

29689

7590

02/06/2008

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CANADA

EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

02/06/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,480	<b>Applicant(s)</b> SCHNEIDERHEINZE ET AL.	
	<b>Examiner</b> MICHAEL RUTLAND WALLIS	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/29/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed 7/16/2007 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Objections***

Claim 1 recites the limitation "the load". There is insufficient antecedent basis for this limitation in the claim.

Claim 1 line 17 recites "in any one of the switch units and the or each switch control unit..." It is unclear what Applicant intends by "and the or each switch control unit" In order to further prosecute the merits of the instant application the above shall be read as "in any one of the switch units and in each of the switch control units..."

Claims 5-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 4. See MPEP § 608.01(n). Accordingly, the claims 5-8 have not been further treated on the merits.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullmann et al. (U.S. Pat. No. 6,787,571) in view of Rupp et al. (U.S. Pat. No. 6,784,571)

With respect to claim 1 Pullmann teaches a safety switching module (Fig. 1) characterised by comprising: at least two switch control units (control units item 80 within channel 24a and channel 24b) each having a switch control input (for example 41 and 42 respectively) to receive a shut down signal (S1 and S2 see col. 5 lines 60-65) and an output (see output of item 22) connected to a respective switch unit (items 30) of a plurality of series connected switch units (items 52, 30 and 47), such that the switch control unit opens the respective switch unit on receiving the shut down signal (emergency off switching item 50, col. 6 line 35-40); a switch monitoring means (see feedback connection col. 6 lines 50-55) provided for each switch control unit, each switch monitoring means being arranged to monitor whether the respective switch unit is open or closed and thereby determine that a fault condition exists if the respective switch unit has not opened on receiving the shut down signal; and an operation control

Art Unit: 2836

input (for example item 81) on at least one of the switch control units, the operation control input being connectable to an operation controller (item 80) for controlling operation of the load (not shown connected to relay connections). Pullmann further teaches the use of an output terminal (item 77) to communicate signals to other switching devices. Pullmann does not teach each of the switch control units is in communication with each other switch control unit such that each switch control unit can determine if fault conditions exist in any of the switch units and in each the switch control unit. Rupp teaches a safety switching device with a first and second channels (items 12 and 14) for actuating (col. 5 lines 23-25) off a machine. Rupp further teaches the use of a communication interface (items 24 and 26) and connections for data interchanges (col. 4 lines 60-67) in order to determine a fault condition or a have received the shut down signal. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Pullmann to provide a communication channel between the switch units in order to provide greater redundancy thereby reducing faults and increase user safety.

With respect to claim 2 Pullmann teaches the monitoring is performed with a feedback loop such that the output is fed back to the input where the input is monitored. Rupp further teaches the use of sensors (items 34 and 36) to monitor switch inputs wherein each monitoring input being connectable to a monitoring contact provided on the respective switch unit.

With respect to claim 4 Pullmann teaches the shutdown signal is generated by a shutdown switch (see items 52 and 48') having a plurality of contacts, each of the shut

down switch contacts being connected (see connection shown in Fig.1) to a switch control input of a respective switch control unit.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pullmann et al. (U.S. Pat. No. 6,787,571) in view of Rupp et al. (U.S. Pat. No. 6,784,571) further in view of Murabayashi et al. (U.S. Pat. No. 6,856, 047) Pullmann teaches the use of a relay. Pullman is not directed to the energization or control of a solenoid. Murabayashi teaches the use of relay driving circuitry to operate or actuate a solenoid (col. 32 lines 30-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Pullmann and Rupp to comprise a solenoid having the monitoring contact physically connected to the solenoid contacts in order to securely drive the contacts to a safe position.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Veil et al. (U.S. Pat. No. 6,246,318) teaches a similar switching system to that claimed in at least claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael J Sherry/  
Supervisory Patent Examiner, Art Unit 2836

MRW